



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/439,314	11/12/1999	GURTEJ S. SANDHU	95-0392.02	1503

7590

12/03/2002

CHARLES BRANTLEY
MICRON TECHNOLOGY INC
8000 S FEDERAL WAY
MAIL STOP 525
BOISE, ID 83716

EXAMINER

DANG, THI D

ART UNIT

PAPER NUMBER

1763

DATE MAILED: 12/03/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/439,314	Applicant(s) SANDHU ET AL.	
	Examiner Thi Dang	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-69 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 41-69 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

Claim Rejections - 35 USC § 102

Claims 41-44 and 50-56 are rejected under 35 U.S.C. 102(e) as being anticipated by *Kumagai*.

The rejection as stated in the previous Office Action, paper no. 12, stands.

Claims 57-59 are rejected under 35 U.S.C. 102(b) as being anticipated by *Shang et al.*

The rejection as stated in the previous Office Action, paper no. 12, stands.

Claim Rejections - 35 USC § 103

Claims 45-49, 60-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Shang et al.* in view of *Lantsman*.

The rejection as stated in the previous Office Action, paper no. 12, stands.

Response to Arguments

1. Applicant's arguments filed 9/4/02 have been fully considered but they are not persuasive.

A. Rejection of claims under *Kumagai*

Applicant's argument is basically related to how the method of plasma processing disclosed by *Kumagai* is different from the intended method of operating the claimed apparatus. The examiner respectfully disagrees with applicant's assertion that *Kumagai* fails to disclose the chambers as claimed. The word "configured" as used in the claims is basically a "means plus function" language. As stated in the rejection, the plasma processing chamber (11) of

Art Unit: 1763

Kumagai is structurally equivalent to the claimed "second chamber" because it is *configured* to generate (i.e., capable of generating) a second plasma. *Kumagai* also discloses that the ignition device can be applied to plasma etching device or plasma CVD (col. 6, lines 10-15). The plasma processing chamber (11) of *Kumagai* is also structurally equivalent to the claimed "furnace" because it is a quartz tube *configured* to house a high density plasma. The plasma ignition chamber (30) of *Kumagai* is structurally equivalent to the claimed "first chamber" because it is configured to generate a plasma therein. The plasma ignition chamber (30) of *Kumagai* is also structurally equivalent to the claimed "cleaning chamber" because it is *configured* to house a gas capable of etching metal. Both chambers of *Kumagai* can lose the ability to generate plasma at anytime when the plasma generator is turned off. Applicant's apparatus claims are not structurally distinguishable from *Kumagai*. It has been held that claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). It has also been held that the manner of operating the device does not differentiate the apparatus claim from prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

B. Rejection of claims under *Shang*

Applicant's argument concerning *Shang* is again related to how the method of plasma processing disclosed by *Shang* is different from the intended method of operating the claimed apparatus. The remote chamber (46) of *Shang* is capable of not generating plasma by turning off the plasma generator.

Applicant's apparatus claims are not structurally distinguishable from *Shang*.

C. Rejection under §103

Lantsman is applied in the rejection for the teaching that it is conventional in the art to use a PECVD apparatus having an RF induction coil. It would have been obvious to apply the cleaning system of *Shang* to another conventional PECVD apparatus like that disclosed by *Lantsman* because *Shang*'s cleaning technique is applicable to a variety of plasma processing apparatus. The reference to "Tobin" was an inadvertent error. *Lantsman* is the intended reference as stated at the beginning of the rejection and *Lantsman* is cited in the form PTO-892.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thi Dang whose telephone number is (703) 308-1973. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



THI DANG
PRIMARY EXAMINER
ART UNIT 1763